

Exhibit 31

vetted by a well-designed and successfully executed pilot study, the full-scale study may still suffer from extremely low response rates.

Another important problem that confronts researchers is contamination of the data as a result of including pretest and pilot test survey results in the final, full-scale study. Because modifications to the survey instrument may have taken place, the data collected in the pretest and pilot test of the surveys could be inaccurate or biased compared to the results of the full-scale study. For example, in the pretest, the ambiguous question, "How many times have you relocated in the last year?" might elicit a response of "twice" that was based on temporary moves. If the question were subsequently reworded to "How many times did you permanently change your residence in the last twelve months?" for the full-scale study, then including the pretest data (based on different wording) would add an incorrect response to the dataset and lower the overall quality of the survey. To avoid this, some researchers have chosen to redesign the questionnaire and readminister the revised survey to respondents who participated in the pretest or pilot study. However, this comes with its own set of complications and poses threats to the internal validity of the study. These respondents may respond differently than they would have otherwise responded had they not been conditioned by the pretesting experience; in experimental psychology, this is known as a "pretesting effect" (Richland, Kornell, and Kao 2009). For example, achievement scales may be positively influenced with a pretest: An individual completing a math problem would likely be more successful when the question is presented a second time, in the full-scale survey, after having first responded to it on the pretest. In other words, individuals who were involved in the pretest study will have experienced these questions, may have thought about them, and may be better equipped to answer when they respond to the survey in the full-scale study.

Of course, it may be unreasonable to exclude these participants from the entire study, especially in small-scale studies or with difficult-to-locate samples. In this case, comparison and discussion of the differences between the pretested groups and the full-scale group is necessary. It is also important to exercise caution when interpreting these results, and it is important to note this potential data contamination as a possible limitation of the research.

Finally, it is highly recommended to organize the timing of pretests and pilot studies to allow for analysis and revision before conducting the full-scale study. It is important to have enough time between administration of the pretest, the pilot test, and the full-scale survey so that edits to the survey can be implemented—and this can often be problematic when a pilot test does not go according to plan and major changes to the study design are necessary. The effort put into conducting a pretest and pilot study are wasted if the results are not made available in time for efficient planning of the full-scale survey.

Despite the time, financial cost, and energy invested in pretesting and pilot testing a survey, these procedures rarely warrant more than a single line in the methods section